

ABSTRACT OF THE DISCLOSURE

The invention relates to a point diffraction interferometer which measures a profile irregularity on a surface to be measured by, irradiating light irradiated from a light source to a pinhole mirror via a collective optical system, irradiating a part of the light diffracted from a pinhole provided in the pinhole mirror to the surface to be measured as a luminous flux for measurement, making the luminous flux for measurement reflected by the surface to be measured interfere with a reference luminous flux which is an other part of light diffracted from the pinhole, and detecting the state of an interference fringe caused by the interference. In the invention, a diameter range of the pinhole is: $\lambda/2 \leq \phi \text{ PH} \leq \lambda/\text{NA}$ (wherein λ is a wavelength of light irradiated from the light source, NA is a numerical aperture of the collective optical system, and $\phi \text{ PH}$ is a diameter of the pinhole).